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ABSTRACT

An overview of the Far West Laboratory (FWL) version of Experience-Based Career Education (EBCE) is presented to acquaint potential adopters with the distinctive features, key roles, learning procedures of the Far West model, and its adaptability to local needs. (Core areas of the FWL-EBCE in which all students are expected to progress are career development, basic skills, and life skills.) Resources, staff roles, student roles, organizing the curriculum, and using resources are discussed. One student's experience with the program is traced to illustrate the key features of the total EBCE process. Other topics covered briefly in the overview are evaluation, highlights of 1973-74 evaluation findings, services available from the Far West Laboratory, and a listing of program materials (handbooks, orientation materials, and procedural aids developed to guide and assist adopters in planning and implementing an EBCE program based on the Far West model). (TA)

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EBCE:
The Far West Model

A PROGRAM OVERVIEW

U.S. DEPARTMENT OF HEALTH
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INTRODUCTION

Experience-Based Career Education (EBCE) is an alternative program of comprehensive secondary education using the entire community as a school. Focusing on direct experience at a variety of employer sites in planned learning activities that blend growth in academic subjects, career awareness, and basic and social skills, EBCE provides students with the knowledge and skills they need to function in the adult world.

The Far West Laboratory version of EBCE was developed and tested at Far West School in Oakland over a three-year period. It has demonstrated effectiveness in achieving student growth in basic, career and life skills, in preparing young people to enter college, seek employment or further training, and in mobilizing and utilizing community resources. The program is now ready for adoption by school districts throughout the country choosing to serve as field-test sites.

EBCE goals and underlying assumptions, staff and student roles, and program procedures and instruments are explained in detail in a complete set of EBCE implementation handbooks, which will be made available to adopters.

The purpose of this overview is to acquaint potential adopters with the nature of the Far West model—its distinctive features, key roles, and learning procedures, and its adaptability to local needs.

Key Features of the Far West Model

1 EBCE enlists competent adults from all sectors of the community as colleagues in the educational process. They share their daily activities, skills and knowledge, and often increase learning incentive by serving as adult models with whom students can identify.

2 It redefines the role of school staff, who become primarily learning coordinators and facilitators rather than teachers in the traditional sense.

3 The student plays a central role in planning and carrying out his own learning, mainly through individual projects which are carefully designed to blend growth in academic, interpersonal, career, and basic skills.

4 Learning activities occur primarily at resource sites in the community, supported and supplemented by staff and instructional materials at an EBCE center.

5 The instructional program focuses on core "process skills" essential for independent and lifelong learning: inquiry, problem-solving, decision-making; and basic skills in oral and written communication, reading, and mathematics.

6 While "booklearning" is essential to the EBCE process of "learning by doing", traditional subject matter is not approached as a syllabus of prescribed and sequenced content. Instead, a given discipline is a *context* in which students can frame questions they deem important, and seek answers by applying learning skills practical situations.

7 Curricular aids, called Project Planning Packages, provide students and staff with a convenient framework for designing projects that integrate academic and career learning. Each package unites a study area (such as social science) and careers associated with it under a single heading. It includes goals, relevant concepts, issues and topics, sample projects, a list of available resources, and suggested readings.

8 While the student is given freedom to pursue self-chosen learning goals that have personal relevance, he is held strictly accountable for his educational progress through carefully specified program procedures. Credit is awarded only for completed work and demonstrated progress. It is then converted into local high school equivalencies, resulting in a standard diploma and transcript.

9 The program is designed as an alternative for all students—regardless of academic backgrounds or future plans—so long as they are willing and able to profit from the EBCE style of individualized, experience-based learning.

10 In focusing on career preparation, the program defines "career" as "one's progress through life", not as a particular job, and views preparation as acquiring the skills, knowledge, and personal versatility one needs in order to choose, pursue, and find satisfaction in a life role.

What Students Learn

The broad goal of the Far West Laboratory's EBCE program is to produce graduates who are: "turned on" to learning, viewing every situation and human contact as an educational opportunity

- planful: not only about their long-range futures, but about how they intend to accomplish more immediate goals and tasks
- self-reliant: able to set their own goals; plan activities; manage their time and other resources; work independently; recognize when they need help and how to seek it; evaluate their own behavior and learn from it; and accept the consequences of their own decisions and actions
- capable of interacting with adults as equals: know what is expected of them as adults; be able to communicate on an adult level, to make and keep realistic commitments, and have reasonable expectations of others
- capable of making realistic and satisfying career choices: more informed about career options and requirements and more aware of their own values, needs, goals, strengths, and limitations
- independent learners: able to identify what is worth learning; to identify and use effective sources and methods of acquiring information; and to analyze, evaluate, and incorporate new information into their own knowledge and experience base

To develop these "survival skills," all students are expected to progress in certain core areas:

Career Development

Career Awareness. Acquiring a broad understanding of the world of work—how people perform tasks, deal with one another, solve problems, and derive satisfaction in their daily lives—and understanding the particular nature and requirements of specific careers.

Self-Development. Learning about one's own interests, abilities, values, and goals, and using this knowledge to weigh options and make informed decisions about post high school plans.

Basic Skills

Developing reading, writing, oral communications, and computational skills essential for acquiring and communicating information in daily life.

Life Skills

Interpersonal. Learning to relate to others on an adult level; recognizing the needs and expectations of others; handling interpersonal conflicts; and contributing productively to group endeavors.

Inquiry. Learning to interpret and critically analyze information and its sources, draw generalizations, develop and test hypotheses, and evaluate data and ideas.

Problem-Solving. Learning to analyze situations, define problems, identify and use appropriate sources of information, evaluate alternatives, and employ effective solutions.

Decision-Making. Learning to recognize decisions that need to be made, to identify options and probable outcomes, to examine personal values and goals affecting decisions, to make informed choices, and accept responsibility for decisions made

Who Makes It Work?

In the Community

The EBCE learning process—an interaction between the students, the Learning Coordinator, and the resource volunteer—depends first of all on the many people who offer their time, ingenuity, work facilities, and practical knowledge to turn the entire community into a school.

Resource Persons (RPs) are adults from all walks of life who volunteer to share their seasoned knowledge and special skills with interested students in a one-to-one relationship. Whether an arc welder or lawyer, printer or biologist, the RP's primary role is to help students become adults, to learn how to think for themselves, make responsible decisions, relate maturely to others, and carry out their own learning projects.

The relationship is voluntary on both sides, and is defined by a set of mutually understood expectations and consequences. Its scope, objectives, and duration are negotiable—depending on the RP's availability and the student's educational needs and interests.

By providing direct experience in a variety of social and economic settings, RPs help students:

- acquire firsthand information about what people actually do in their daily work, how they feel about what they do, and what kinds of knowledge and skills are needed to enter and succeed in particular careers;
- learn more about who they, the students, are and what they want to become by testing their values, interests, and abilities through actual experience;
- improve reading, writing, and computational skills by *using* them to solve real problems in everyday life situations and by challenging them to employ these skills on an adult level;
- integrate learning in ways not possible in the traditional classroom by seeing how career skills, academic concepts, and social issues converge in the need to solve practical problems;
- develop some technical skills through hands-on experiences in real or simulated work tasks.

While the core of the EBCE learning experience is this one-to-one relationship between a student and an adult interested in his education, two other kinds of resources are used in the program:

Resource Organizations (ROs) range in size from fewer than ten to more than several hundred employees, and open most or all of their operations to students. Activities at these sites typically include pre-planned group briefings, tours, and observations and discussions with individual employees. Resource Organizations give students broad exposure to a total organization: the nature of the business; its relationship to the community; the kinds of jobs performed there; how particular careers interlock; the working conditions and environment; and educational prerequisites for job entry.

Community Resources (CRs) are institutions or organizations open to the public, such as museums, libraries, aquariums, parks, courts, and city council meetings. Students use them when working on projects and to supplement information available from other resources. At these Community Resource sites, and at Resource Organizations, students may identify RPs who are willing to work with them on individual projects.

A **Policy Advisory Board** whose members are representative of participating community interests—employers, parents, school administrators, union officials—provides recommendations on program policy matters and serves as a mechanism in eliciting and maintaining community support.

Resource Development. Individuals and organizations are recruited to form a balanced pool of resources that can accommodate student interests and high school graduation requirements, and which provide a representative mix of career fields.

Resource sites are analyzed for their learning potential in career awareness, academic subjects and issues, and the application of basic skills. A range of on-site learning activities, from which students can choose in designing their projects,

are mutually agreed upon by the Resource Person and EBCE staff, and conveyed to students in the form of Resource Guides.

Community liaison and support is maintained through regular contacts from EBCE staff, newsletters, and open houses. A field manual, called *A Guide for Resource Persons and Community Organizations,* is used to orient resources and explain their role and function.

To aid EBCE adopters, the *Resource Development and Support Handbook* explains how to assess local resource needs, recruit and orient volunteers, analyze their work sites, and prepare Resource Guides for student use.

Staff Roles

While students will spend a major portion of their time at learning sites in the community, a school center serves as a home base where they plan projects, schedule appointments with resources, and return to digest and share their experiences in the community. Located in a school or in a separate facility, the EBCE center is where students use supplementary resources such as tutorials, workshops, and programmed instructional materials, coordinated by a **Skills Specialist**. Here students also come in contact with the **Program Director,** who serves as administrative coordinator and staff supervisor, a **Records Clerk,** and the **Resource Analyst,** who is responsible for recruiting, analyzing, and maintaining the pool of resources. The key staff role, however, is that of the **Learning Coordinator** (LC).

Like all adults involved in EBCE, the **LC** plays a multi-faceted role as helper, facilitator, and resource. By promoting inquiry and self-initiative, and by providing guidance and assistance as it's needed, each LC works with 20 to 30 students to help them:

- formulate long-term goals consistent with their own interests and educational needs, and decide what steps are necessary to achieve them
- determine what's worth learning, focus areas of inquiry; identify resources, and develop project plans
- refine their interests, clarify values, and continually assess needs, based on cumulative experience
- integrate what they know about themselves with information about career and educational opportunities
- monitor their own learning progress: articulate problems, devise appropriate solutions, and modify strategies to incorporate new insights and emerging interests.

The LC coordinates the student's total learning program and monitors on-site learning experiences through counseling sessions and regular contact with resources in the community. LCs are teachers in one important sense—working with students individually and in small group sessions, they can teach inquiry, problem-solving, planning, and decision-making skills necessary for independent learning.

LCs also provide students with the kind of feedback that can help them make sense out of what they are doing and learning in the community. This process of consolidating and interpreting their diverse experiences, of reinforcing and further stimulating learning, pervades all staff's daily interactions with students.

Role of the Student

Within the framework of EBCE goals and clearly specified accountability procedures, the student acts as planner, decision-maker, and self-evaluator. He is allowed to pursue his particular needs and interests, at his own pace, and according to learning methods best suited to his purpose and capabilities.

Projects. Students plan and carry out their learning through individual projects, using goals and evaluation criteria they help specify. Designed to blend growth in academic subjects, career development, and basic and life skills, each project:

- is organized around a topic or issue relevant to a career or discipline;
- is focused in terms of significant questions that require for their answer planned learning experiences at resource sites and the use of other information sources such as related readings;
- includes activities that require the student to apply communications, interpersonal, and/or computational skills in practical, career-related situations; and
- results in demonstrable growth toward stated goals, and in tangible products for which credit is awarded.

Organizing the Curriculum

Because EBCE departs from the conventional classroom approach to content and instruction, the Far West program has developed curriculum guides, called **project planning packages,** tailored to the unique aims of the model.

A package is not curriculum, but rather a structure within which individualized curriculum can be planned and carried out in the form of projects. Each package unites under a single heading a broad area of study and its related professional and technical careers, and enables a student to focus his learning on an academic subject area, a significant issue, or a career field, while simultaneously learning about all three.

Prototype packages have been developed in the following areas: Social Science, Commerce, Physical Science, Communications and Media, and Life Science. Easily adaptable to local needs, each package contains the following essential parts:

- ☆ **Package goals** define the package scope and range, set minimum requirements, and identify significant underlying concepts and process skills of the career/discipline area.
- ☆ **Sample projects** demonstrate how students can pursue their own interests while meeting minimum requirements for credit, and learn those skills, concepts, and principles considered basic to the package career/discipline area. They also serve as exemplary samples of completed program planning forms (the Project Sketch and the Student Project Plan), while offering project suggestions for students to pursue.
- ☆ The **annotated list of resources** describes resources available for learning activities relevant to the study area.

In addition,

- ☆ A statement about **required group discussions** explains their nature and purpose. Students working on projects within a career/discipline area meet regularly to broaden their exposure to the field by discussing what each of them is doing and learning.
- ☆ A step-by-step description of **how to plan and complete a project** provides guidance on how to plan projects and a reminder of the tasks involved.

Other sections not as critical to the package concept, but time-savers for students and staff, include an introduction; a bibliography; project ideas; careers to explore; and a list of courses for which students could seek subject matter equivalency credit, depending on the content and focus of the project they design. Within this flexible structure, students can plan more ambitious projects to earn more credit, or can plan two or more smaller projects to meet the minimum requirements.

A student might develop a project in the Social Science Package because he or she needs American Government credit, or is interested in some political issue like rent control, or wants to be a probation officer or teacher.

Using the package and working with staff, the student selects the resources to visit in getting a fix on his project topic. Students are allowed to explore several possible topics and resource sites if necessary before clarifying and narrowing their theme for a full-scale project plan. The student interested in rent control, for example, might visit Resource Persons at the housing authority, the legal aid society, and a city councilman's office, only to become involved in a more interesting topic, such as affirmative action employment programs and how they are working.

Before long, however, the student must firm up his project plan. (While students may explore as much as they want, they earn credit only for completed projects or other work such as tutorials.) With the assistance of his Learning Coordinator and chosen resources, the student identifies on a project planning form:

- ☆ a focus or theme for the project.
- ☆ questions for which he is seeking answers;
- ☆ Resource Persons and Organizations he will be working with;
- ☆ related reading;
- ☆ an estimate of time required in visiting resources, doing related research, and developing at least one product; and

- ☆ project goals and indicators—what he wants to learn about or learn how to do through the project, and how he will know and demonstrate to the staff that he has achieved his goals. In addition to thus spelling out how his work will be evaluated, he designates who the evaluators will be and deadlines by which he plans to complete his goals.

He also negotiates with his Learning Coordinator the amount and kind of credit he will earn if the project is satisfactorily completed. The package goals provide a standard for use in negotiating credit. If a student's project meets the minimum package goals, he will receive a specific amount of credit.

The package provides the structure and the student's project provides the mechanism for integrating learning of process skills with subject matter content. For example, problem-solving skills are developed by applying them to specific issues or problems. These are examples of questions addressed by Far West students in some of their projects:

- ☆ What causes inflation and what are some possible solutions?
- ☆ What is the impact of revenue sharing on the city government's ability to provide necessary services to its citizens?
- ☆ Who runs the schools, how are decisions made, and how are the schools meeting the needs of the city's minority groups?

In asking these questions—in trying to define the problems that lie behind them, in seeking sources of information (interviewing people, reading newspapers, attending meetings of community groups), and in evaluating and discussing their findings with Resource Persons, fellow students, and staff, students are developing problem-solving skills, while learning a great deal about government and politics, and at the same time broadening their awareness of the careers involved. The package design emphasizes to students that growth in life, basic, and career skills is a natural part of every learning project, whatever its particular content.

Using Resources

To satisfy diverse needs and interests, students can become involved with resources at levels varying in purpose, duration, and intensity.

The most basic level, the **Orientation**, allows the student to become acquainted with the Resource Person and his organization and to discover what can be learned there. For example:

Michael had decided that he wanted to pursue an interest in journalism and made an appointment with Mr. Jim Morrison, director of public relations for a large East Bay industrial firm. After spending their first session telling Michael how he happened to get into this line of work, Mr. Morrison described his responsibilities: handling the company's external publicity by sending out feature articles and press releases, and managing internal communications to keep employees informed of company developments. When Michael said he was not sure such a job would allow him to do the kind of writing he was interested in, Mr. Morrison told him of his own early experiences as a free-lance writer and explained the uncertainties involved in such a profession. After a morning spent touring the company and going over some of the publications in detail, Michael decided that he would be able to get valuable writing experience by working with Mr. Morrison and arranged with his Learning Coordinator to extend his participation and begin planning a project.

To ensure that students' Orientation experiences are purposeful—at least in terms of probing an area of interest they might decide to pursue in a project—they are required to develop a brief project sketch to guide and document their experience. They are allowed and in fact encouraged to have Orientations at more than one site. Ultimately, however, they must focus on some specific project requiring a long-term involvement with an RP or RO.

The next level of involvement is the **Exploration,** which allows students to begin to explore a particular career or study area:

Arthur had contacted Thomas Ross, foreman of a small print shop, for an Orientation. After going through the building and spending a few mornings talking to some of the workers, he decided he would like some practical experience. He and Mr. Ross determined that he would come to the shop three mornings a week for a month. He would learn the various printing processes done in the shop by working alongside the operators of the different machines and by following particular jobs through all stages leading to completion. After he discovered that he was most interested in the silk-screening process, Arthur and Mr. Ross decided that a good project would be to design and print some safety posters. By the end of the Exploration, Arthur's project was completed (the posters were, in fact, good enough for Mr. Ross to have them posted throughout the plant) and his interests in printing had begun to gravitate toward the role the union played in a printer's daily life. Mr. Ross arranged for him to meet the printers' representative on the Central Labor Council and talk about pursuing the subject further.

At the **Investigation** level, students develop more specialized skills and knowledge:

Susan had completed an Exploration with Mrs. Greene, counsellor at the Center for Continuing Education for Women, in which she learned how the Center's program of career, academic, and personal counselling worked. She had done some clerical work in the referral program and in the women's library. In deciding to begin an Investigation-level activity, Susan agreed with Mrs. Greene that she would come to the University three mornings a week during the next quarter and that her primary effort would be to set up a workshop for teenage women on career opportunities. Mrs. Greene also arranged with Susan's Learning Coordinator for her to audit a course on women's rights in the University's Sociology Department. Toward the end of the quarter, as Susan began correlating her work in the course and her practical experience in setting up the workshop, she decided that one of her products would be a lengthy report on the problems involved in counselling young women about careers.

At the Exploration and Investigation levels, the student must spell out his objectives and products and complete an individual project plan, more detailed and comprehensive than the project sketch.

The scope and duration of projects are flexible to accommodate individual interests and learning styles. Terms like Orientation, Exploration, and Investigation are meant to indicate the possibilities inherent in students' relationships with Resource Persons, not to force them into prefabricated molds.

Within the structure of EBCE goals and specified procedures, RPs and students are free to make the method suit the need. For example, one RP—a public relations manager in a large corporation—chose to combine the interests of several students into a group project, which he explains as follows:

"After a 'getting acquainted' session with my group of four students, I explained the possibilities in an advertising program development project. I tried to make it clear that it would be based on their own work, and that when they completed it they would have something real to show.

"Based on their main personal interests, we decided what function each of them would represent in the advertising agency we had formed—copywriting, art department, market research, management, etc. We discussed the first requisite of getting started which is, of course, a client. The students chose Coney Island, a restaurant on the ground floor of the Far West School building.

"We then planned activities with chapter headings: **market study** (location, market size, volume, price, atmosphere, service, competition, food quality, suggestions for improvement, etc.); **media** (examination of available media for advertising, with rationales for selecting one over another); **message** (the ads themselves, copy preparation, layout, type face, etc.); **campaign** (the release dates for the ad messages and the reasons involved in the choice); **merchandising and sales promotion** (what 'deals' and incentives could be established to get customers); **budget** (based on the percentage of volume and the need for market coverage); and **evaluation and follow-up** (interviewing to evaluate reception of the campaign, analysis of the sales results, etc.).

"Discussion and interest have grown since we began. I think I got 'turned on' when, early in our discussions, one of the students interrupted me and said, 'Wait a minute, we'll do it.' I realized that it had become *their* project.

"By the end of the semester, the students had put together a portfolio which they presented to the owner of Coney Island. It included a demographic analysis of the potential clientele, a run-down on competitors, recommendations for bettering the atmosphere and service of the restaurant, and sample flyers. The owner was so impressed that he actually bought an advertising campaign from them, implementing some of their recommendations and distributing one of the flyers."

One Student's Experience

The key features of the total EBCE process are illustrated by the experience of one student during his first year in the program.

Lee was far from a typical student, yet he believed (along with many of his friends) that school was "boring" and had complied with his assignments in the first two years of high school "only for the grade." The only course that had really interested him during his sophomore year had been an English class in which he was encouraged to write short stories. Because of the "pressure to be right," he spoke in class only when forced to. He was the kind of student inevitably labeled with the phrase, "doesn't work to capacity."

Lee entered the EBCE program at the beginning of his junior year. During initial diagnosis, he and his Learning Coordinator agreed on a tentative profile as a basis for planning: his writing ability was very good; his math skills needed improvement; he was most comfortable "taking his time" doing things and a little shy about meeting people; he needed graduation credits in Science, American Government, and English; and he had no particular career interest.

During the first three weeks, students are initiated into the EBCE learning process. Through a series of planned workshops and field activities, they find out what the program's learning resources are and how to use them, and learn that they are expected to manage their own time and exercise initiative and responsibility. Like some of the others, Lee was reticent about going out. He chose for his first resource orientation the Southern Pacific Railroad, mainly because he'd always liked trains.

During the four half-days of activities at Southern Pacific, Lee and four other students spent time in the claims office, the engineering department, the main office, and the crew dispatching office. They met a yardmaster, a tower clerk, a perpetual inventory car location clerk, a rate clerk, and a billing clerk, observing them at work, and asking them questions about their jobs. They were shown how computers are used to keep track of every car and how to program a card. Out in the yard, they talked to brakemen, switchmen, and engineers, went through control towers and interlocking towers, and rode on a train.

In the offices, the routine and monotony of so many "menial jobs" boggled Lee's mind. When he asked one of the clerks why he did it, the man answered frankly: "I need the money." But out in the yard things were more relaxed. One carryall driver who transports crews told Lee the railroad was part of his family: he had been with Southern Pacific for 30 years, and both his brothers were now employees of the railroad.

In one of the regular discussion group sessions back at the center, Lee commented that at first he thought it was ridiculous that the several unions at Southern Pacific could fracture the tasks into absurdly small pieces. (For example, after a carpenter had drilled through a piece of wood, he had to call an iron worker to drill through the metal behind it.) But a union man had explained the necessity of protecting the worker's rights and cited examples of how bad the working man's life was before labor had organized. He agreed that so many unions could be cumbersome, but felt the benefits far outweighed the inconvenience. Lee was intrigued by the problem and his Learning Coordinator recommended a good book on the history of unions.

For his next orientation, Lee chose Mason Business Forms. After completing a project sketch in which he specified questions he wanted to explore—especially what kinds of communication skills are involved in designing business forms—Lee got acquainted with his Resource Person, a salesman named Don Stone. Don showed Lee how forms were designed to meet the particular needs of clients in various kinds of business. It turned out to be more creative than Lee had supposed. You needed to be able to visualize problems, use drawing techniques, and understand spacing and layout. And it was complex: with the forms used on computer equipment, one one-hundredth of an inch becomes a critical factor. Don let Lee try his hand at improving the design of a form currently in use.

Lee discovered that Don had several long-term relationships with clients and seemed genuinely concerned with their needs. Watching him

make presentations, Lee was impressed with his ability to do on-the-spot designing, probing the client for enough details to make the form more efficient than the client originally had called for, but couldn't see himself doing it for a living because it was too technical.

Lee met with his LC to discuss his EBCE experiences so far. He had gained valuable insights at Southern Pacific and Mason Business Forms, although neither place had kindled a strong enough interest to lead to a more detailed project. His LC noted that while Lee was getting credit for his math tutorial and the beginning Spanish class he had enrolled in at a local junior college, it was time to begin more intensive learning experiences, aiming at growth in core program areas. They agreed he could fulfill needed science credits by pursuing a sample project from the Life Science Package at Western Laboratory, which performs clinical diagnostic work for hospitals. The broad goals of the package are to learn scientific methods and concepts as they are applied in a variety of practical situations.

At Western Laboratory, Lee worked with John Buckner (the director) and three technicians over a period of several weeks. As a prerequisite to his learning experiences there, he was asked to read several chapters of a college text called *Clinical Diagnosis and Laboratory Methods*, which he found "advanced but challenging." He was instructed in techniques used in electrophoresis and hematology. He learned how to run chemical tests for pregnancy, took a culture from his own throat, incubated it, performed a complete analysis. He also analyzed a sample of his own blood, from which he concluded that his diet was too high in carbohydrates. Some of the skills Lee worked on in his math tutorial were based on his need to figure ratios and percentages in performing these tests.

Lee was interested by what he learned about the blood system, and in a workshop session explained to other students how leukocytes (white cells) attack bacteria during infection, and how under the impact of certain diseases like leukemia they go berserk and devour everything in sight.

With Mr. Buckner he specified the goals of the project. He would do a report on the causes, treatment, and social implications of sickle-cell anemia based on readings in medical journals and tests, graphs, and printouts done from work with Western Laboratory's machines.

It took Lee seven weeks to complete the project. Originally he had considered using other Resource Persons in the Life Science Package, such as Dr. Mitchell, who does research in immunology, and Bob Gilmore, a machinist in a physiology laboratory, who builds the kind of equipment used at Western Laboratory. But he decided that he was not really interested enough in science to go any further.

One Student's Experience (continued)

Lee began the spring semester with a lengthy planning session with his Learning Coordinator. He realized that his math skills had improved during the fall and decided to continue with the tutorial. He also enrolled for the second semester of Spanish at the junior college. He felt anxious to get to work on a project that would involve his continuing interest in communications. Putting together a number of areas he was interested in—descriptive writing, broadcasting, films, and television—he decided to develop a project in the Communications and Media Package.

Mapping out a tentative plan with his LC, Lee decided to begin by working on a newspaper. He arranged an interview with the managing editor of the Berkeley *News*. After explaining the paper's philosophy for covering national and local news, the editor turned Lee over to a reporter named Tom Kenley. Kenley allowed Lee to follow the development of a news story from editorial conference, to field interviews, to the actual writing. He explained proofing symbols and techniques for writing leads and cutting copy. Introducing Lee to reporters in other departments, Kenley explained the differences in style between news copy, feature articles, and sports, editorial, and society-page material. He let Lee copy-edit a short article and then went over it with him. In the course of their conversations, Lee remarked that he had worked as a volunteer cleaning up the beaches after an oil spill in San Francisco Bay and had been upset later on to read newspaper accounts that he felt falsely minimized the extent of the damage and the responsibility of the oil company. Kenley talked at length about biased coverage, the difficult problem of separating fact from opinion, and the frustrations reporters experienced when their copy was altered to fit editorial policy.

It was while talking to Kenley about the upcoming municipal elections and the controversy surrounding a ballot referendum regarding fluoridation that Lee got the idea of "covering" the election as a reporter for the *News*. Lee went back to his LC, who pointed out that it sounded like a good entry into the politics section of the Social Science Package. He could pursue his career interest in journalism by focusing on the fluoridation issue, while also acquiring a basic firsthand understanding of city government, local politics, and the careers associated with them. In the process, he could earn credits in both American Government and Journalism.

Having secured Tom Kenley's cooperation, Lee made an appointment with George Elia, staff assistant to the city manager, who became the other Resource Person for this project. While getting acquainted, they toured the offices at City Hall, where Mr. Elia had worked for twelve years. His current responsibility was drafting measures which the city manager proposed to the city council. It was Mr. Elia, in fact, who had originally drafted the fluoridation measure which was now the subject of heated controversy.

Based on suggestions made by Mr. Elia and using some of the interviewing techniques he had learned from Tom Kenley, Lee began to interview various of the personalities involved in the fluoridation measure, including the campaign manager of the forces trying to overturn the measure, public health officials, environmentalists, and the city attorney who had handled the suit when antifluoridation forces attempted to seek an injunction keeping fluoride from being added to the city's drinking water.

Working with both Resource Persons and his LC, Lee was soon able to formulate the major outcomes of his project in a detailed project plan.

1. I will describe in outline form the following three occupations: staff assistant to the city manager, political consultant, and city attorney. Each outline will include the following information: roles and functions of the job; working conditions; and outlook, qualifications and features of the job as they relate to my own career interests. These outlines will be reviewed by Mr. Elia for correctness.

2. I will write two 500-word newspaper articles acceptable to Mr. Kenley. One of them will compare the values and other factors motivating the pro- and anti-fluoridation factions. In the other, I will discuss the public health implications of fluoridation. These articles will be based on interviews I will conduct with members of both campaigns as well as with public health officials. I will also make a bibliography of the literature of fluoridation and review the major works.

Lee was fascinated by the personalities of the individuals involved in the campaign and compiled several hours of taped interviews with them which impressed Tom Kenley. From the onset, however, he had trouble with the second article. The literature on fluoridation was vast, and while the weight of "reputable" medical opinion was in favor of the measure, Lee had interviewed doctors who vehemently argued against it, claiming that although fluoride undeniably prevented tooth decay, it also did long-term damage to bone, cartilage and other tissue growth. While Lee felt he had learned a good deal about the matter, he decided to revise his project to eliminate the second article.

Lee was deeply involved in the campaign up to election day. From his experiences, interviews, discussions, and reading, he drew the following conclusions:

1. The campaign to repeal the fluoridation measure lost primarily because the medical establishment opposed it.
2. Nonetheless, far more voters had supported the referendum than had been anticipated; opponents of fluoridation were more committed and better organized than its proponents.
3. The city's white middle- and upper-class had a much larger voter turnout than any of the ethnic groups and had therefore effectively determined the outcome of the election.

Lee had particularly enjoyed constructing a voter precinct map; it enabled him to visualize how socio-economic and ethnic groups voted by neighborhood. Although his project had been scaled down to just one article, the piece he submitted profiling the leading personalities in the pro- and anti-fluoridation camps impressed Tom Kenley so much that he got it printed on the editorial page of the post-election wrap-up printed by the *News*.

As the Spring semester drew to a close, Lee summed up his experiences: "I'm more aggressive and efficient about getting things done. I'm less shy and much more open to people. I feel I know what's happening out in the world." Having worked in a "print medium," he planned to explore broadcasting during his senior year. He was thinking seriously of going on to college to major in journalism or perhaps telecommunication. He had concluded that although journalists have to meet tight deadlines, there was plenty of "mental elbowroom."

Evaluation

Since its inception, Far West Laboratory's EBCE program has been carefully monitored and evaluated by an internal staff and external review teams from the National Institute of Education and the Educational Testing Service. Evaluation efforts have concentrated not only on measuring EBCE's impact on the development of basic skills but also on determining the extent of change of Far West students' attitudes toward their school, their future, and themselves.

Far West School has had a sizeable number of students, some of whom have participated in the program for all three years of their high school career. The student body has been selected to reflect a cross-section of the local high school population in terms of ethnic background, male/female ratio, socio-economic status, and scholastic achievement.

Year	Number of Students	Sex (%)		Ethnicity (%)					Grade (%)			Grade Point Average (A = 4)
		Male	Female	Asian	Black	Chicano	Native American	White	10	11	12	
1972-73	30	63	37	7	23	23	0	47	6	57	37	2.3
1973-74	61	47	53	2	27	16	2	53	27	26	47	2.2
1974-75	102	40	60	1	48	8	2	42	42	29	29	2.2

Highlights of 1973-74 Evaluation Findings

Student Attitudes The vast majority of Far West students responded positively to interviewers questions about their attitudes and experiences. Ninety percent of them indicated that FWS helped them form their post high school plans for work or college, as opposed to 50 percent of Oakland Public Schools control group students. Far West students also rated their school higher than the control group when asked about its ability to help them assume responsibility, evaluate their own performance, and organize their activities. They felt that during their education at FWS they had been treated like adults, been able to pursue interests they considered genuine and important, and had learned how to get along with others. Over 85 percent of them expressed a strong preference for FWS over the school they had previously attended. Their enthusiasm was reflected in the fact that of 61 students in the program at the beginning of 1973-74, only three withdrew in the course of the school year.

Parent Attitudes. Eighty percent of all parents interviewed indicated a preference for Far West over the schools previously attended by their children. They rated FWS highly on its ability to develop positive attitudes toward self in the students and to make them assume responsibility for their own actions. Many parents reported marked student growth in self-confidence, poise, independence, and motivation to learn. Nearly all of those questioned indicated that they would send their children to FWS if again given the choice.

Community Participant Attitudes. A significant majority of the Resource Persons questioned felt positive about their interchange with FWS students. Over two-thirds of them said they thought experiences at the resource sites had been worthwhile and that in working there students had increased their job knowledge and abilities. Most of the RPs indicated that they would continue to serve in the program and urge others to also become involved.

Basic Skills. On standardized tests, FWS students showed solid improvement in reading and computational skills. In a writing sample evaluated by an independent team of local high school English teachers, students showed a significant increase in their knowledge of the mechanics of writing and in the maturity and effectiveness of their written thoughts.

Follow-Up of Graduates. Thirty-four students had graduated from Far West School by January, 1975. Of those responding to evaluators' questionnaires, 70% are now attending school, including the University of California (Berkeley, Santa Cruz, and Davis campuses), California State Universities (Humboldt, Chico, Hayward, and others), private universities and colleges (Fisk, Mills), and community colleges. Many of those in school are also employed part-time. 25% of the respondents are working full-time. The remaining 5% are working part-time, travelling, or engaged in similar activities.

Services Available from The Far West Laboratory

To aid adopters in planning, developing, implementing, and evaluating EBCE programs patterned on the Far West model, the following services will be made available by FWL staff:

1. Orientation Sessions
To familiarize adopters with the Far West model—its purpose and distinctive features, underlying assumptions, program procedures, key roles, and user handbooks.

2. Planning Assistance.
To aid administrators and decision-makers in determining local needs, intended outcomes, and desired adaptations of their program, and to assist them in planning implementation strategies and scheduling tasks, such as staff selection and arranging facilities.

3. Staff Development.
To provide training to help local EBCE staffs internalize the goals, underlying values, and organizing concepts of the Far West Model; and to help them develop the knowledge and process skills necessary to fulfill operational roles (Learning Coordinator, Resource Analyst, Skills Specialist, and Program Director).

4. Technical Assistance.
To provide adopters with on-site assistance in planning and carrying out successful program operation. Activities include helping EBCE staff develop local awareness and support; modifying program materials to fit local needs, recruit resources and students; planning evaluation activities; and trouble-shooting program operations to identify problem areas and determine corrective actions.

Program Materials

The following is a list of the handbooks, orientation materials, and procedural aids developed to guide and assist adopters in planning and implementing an EBCE program based on the Far West model.

Orientation

Far West tape-slide presentation. Explains the EBCE concept and illustrates the learning process.
The Community is the School. A brochure describing the Far West EBCE program.*

*Easily adaptable for local use

Administration

Administration Handbook. Describes staff roles and qualifications, logistical requirements, and administrative procedures.

External Relations Handbook. Provides guidelines for developing and maintaining relationships with local schools, community groups (unions, parents, and significant others), and the establishment of a policy advisory board.

Student Recruitment and Selection. Describes student recruitment and selection procedures.

Summary of Evaluation Findings. Summarizes methods and findings of program evaluation for the 1973-74 school year.

Community Resources

Resource Development and Support Handbook. Explains procedures for the recruitment, analysis, development, and maintenance of learning resources in the community (RPs, ROs, and CRs).

Guide for Resource Persons and Community Organizations. Pamphlet designed to orient resources in the community to their role in the Far West EBCE program.*

*Easily adaptable for local use

Curriculum and Instruction

Student Guidance Handbook. Describes processes for entry assessment of student needs and interests, student program planning, progress monitoring (including on-going assessment of needs and interests), credit assignment, record-keeping, and guidance (the role of the learning coordinator in facilitating student learning programs through individual and group sessions).

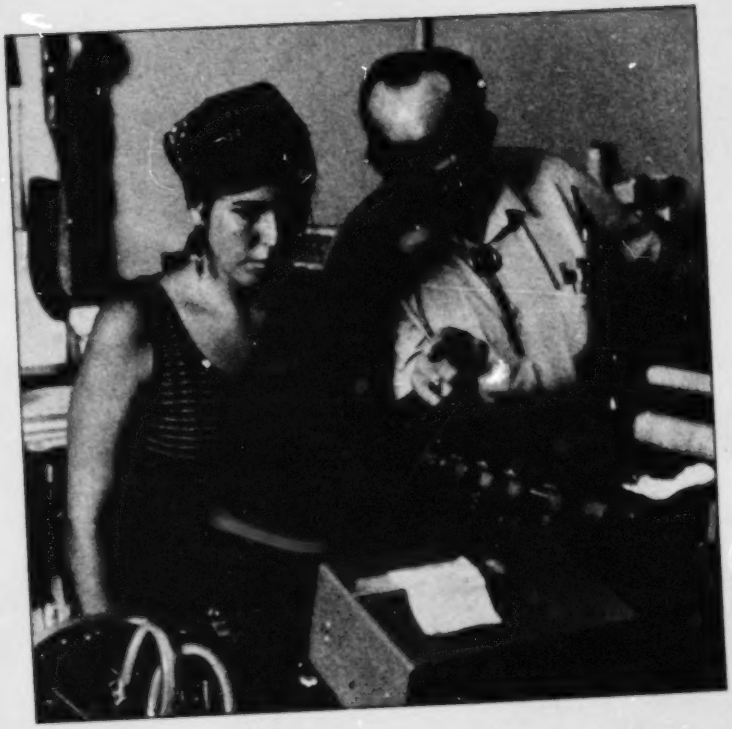
Student Orientation Handbook. Describes processes for orienting new students entering the EBCE program.

Supplementary Curriculum Handbook. Describes staff roles and processes for arranging, using, and coordinating supplementary learning resources and activities, including individual and small-group tutoring, workshops, external courses, and instructional materials.

Project Planning Packages. Curricular guides for student project planning in five career/subject fields: Life Science, Commerce, Communications and Media, Physical Science, and Social Science.

Package Development and Implementation Handbook. Describes procedures for developing, using, and updating packages as tools to facilitate student project planning in a variety of subject or career areas.

Program Forms. Single copies of the forms and instruments used as aids in planning, scheduling, monitoring, and evaluating student learning activities.



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